Universal Seat Heater Installation Instructions

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Rostra Precision Controls, Inc.

Form #4708, Rev. C, 01-13-09

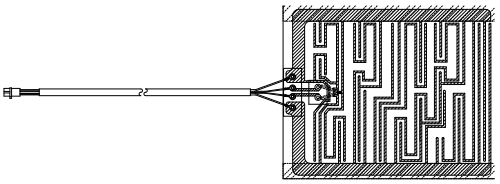
PARTS LIST

KIT#	CONTROLLER	ELEMENT	SWITCH	HARNESS	SACK PTS
250-1550	250-2225	250-2226	250-2239	250-2228	250-2229
Item	F	A	E	B,C,D	G

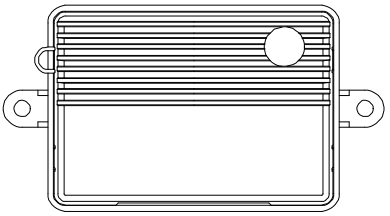
SWITCH EXTENSION HARNESS (May be ordered separately)
250-2240
H

PARTS DIAGRAM

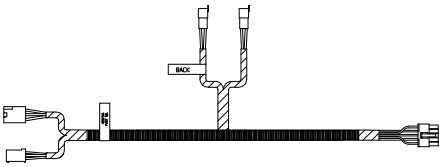
Heater Element 'A'



Control Module 'F'



Controller Harness 'B'

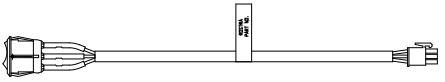


Sack Parts 'G'

Scotch Lock
Cable Ties
Ring
Terminal

Extension Harness 'C'

Switch Assy 'E'



Fused Harness 'D'

Switch Extension Harness 'H'

HELPFUL HINTS

1. **Before Starting Installation:**
   a. Automotive electrical experience is beneficial for this installation
   b. Familiarize yourself with the installation instructions and seat heater system components, prior to installing the system.

2. **Air Bag And Anti-Theft Radio:**
   a. If vehicle is equipped with an Anti-Theft Radio, the radio code must be written down prior to disconnecting battery cable. The code must be re-entered when the negative battery cable is re-installed.
   b. If vehicle is equipped with an Air Bag, it is advisable to disconnect negative battery cable for 3 minutes before beginning installation.

3. **Removal Of Negative Battery Cable:**
   Disconnect the negative battery cable before installing seat heater system components as a safety precaution. **Figure 1**

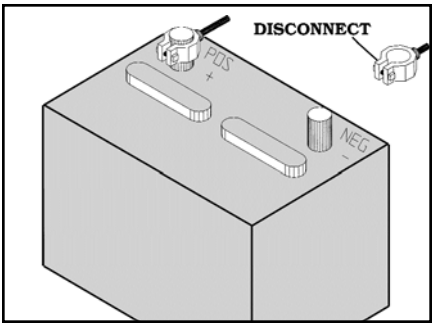


Figure 1

!WARNING!
Do not tap or solder to any AIRBAG circuits (Yellow tape, Tubing, and Connectors will indicate AIRBAG circuits)

4. **Accessory Power:**
   When installing the special terminal into fuse panel of vehicle, use as shown in **Figure 2.**

5. **Notes:**
   a. Refer to vehicle owner's manual for any wiring identification.
   b. Seats manufactured using the "foam in place" method of trim cover attachment will not be applicable at this time.
   c. Verify that all seat motions are still possible without any interference from harnesses or switch installation.
   d. Remove the seat from the vehicle and place on a clean work bench.

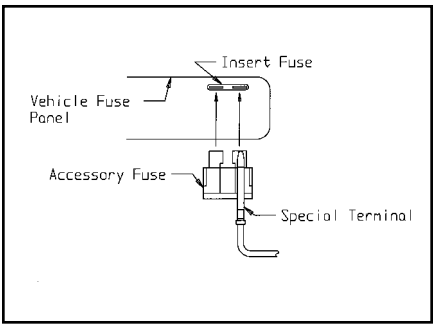


Figure 2

INSTALLATION

SEAT HEATER ELEMENT

STEP 1:

Remove seat back cover and cushion cover to expose seat foam.

A. Seat cover attachment types:
   * **J-Clips**: Insert panel puller into channel (in the seam on bottom edge of seat back) and pull the other side of the seam over the channel to release.
   * **Zipper**: Unzip as necessary.
   * **Hog-Ring**: Requires Hog-ring pliers and replacement rings. (Cable ties can be substituted) Cut existing rings to remove.
   * **Removable Pocket**: Held in with push-pins or screws. Usually removed from bottom edge of seat back.
   * **Rigid back**: Remove screws from bottom edge of seat back.

B. Seat back cover:
   a. Turn the cover inside-out as you roll it up.
   b. Working from the rear, remove the front of the seat cover from the frame. It will be held in place by Velcro, Springs, Hog-rings or Tie-bar (visible from bottom edge).

C. Seat cushion cover:
   Working from the bottom of the seat, unsnap the J-clips and/or the Hog-rings to expose the bottom seat cushion.

!WARNING!

It is important for the proper function of this system and to insure a malfunction does not occur that special attention is given to the installation of the seat heater element relative to the seat foam. **If the element is folded, or creased over onto itself it may cause a premature failure of the system**. In addition, it is important that the installer **does not pierce or short** the element with metal devices such as Hog-rings, or etc.

!WARNING!

Do NOT Cut or Trim the element.

STEP 2:

Mount Element '**A**' On Seat Cushion: **FIGURE 3**

A. Both elements provided in kit are identical.
B. Ensure element width will fit in the desired location.
C. Remove the protective layer from the double sided tape on the heater element and center side to side on the seat cushion keeping the heater element away from any plastic or metal objects. The harness from the element should be routed toward the back of the seat and secured with cable ties.

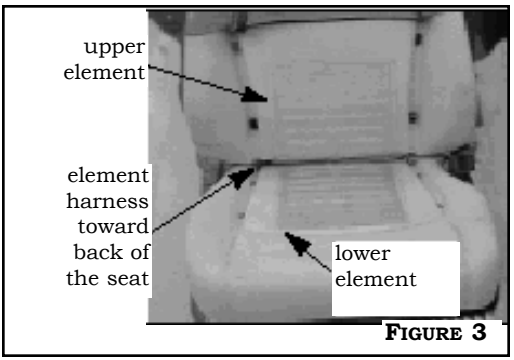


FIGURE 3

INSTALLATION

STEP 3:

Mount Element '**A**' On Back Rest Cushion: **FIGURE 3 ON PAGE 4**

A. Repeat Steps 2B and 2C.
B. Remove the protective layer from the double sided tape on the heater element and center side to side on the seat cushion keeping the heater element away from any plastic or metal objects. The harness from the element should be routed toward the bottom of the seat and secured with cable ties.

CONTROLLER MODULE

1. Connect the 10 pin connector on the controller harness '**B'** to the controller module **'F'** connector.
2. The default setting for the system is **Back and Both Mode**. Cut away the external wire loop to get **High and Low Mode** operation.
3. Secure the controller module '**F'** and harness **'B'** to the underside of the seat cushion frame using cable ties.

SWITCH INSTALLATION

NOTE: Seat plastic cuts best at room temperature.

BOTH ELEMENTS OR HIGH SETTING

1. Choose a switch location on a flat surface where switch wires won't interfere with seat movement.
2. Mark the switch location, cut an opening using a punch tool or drill bit (13/16 in. or 21mm).
3. Insert switch Assy **'E'** through opening and snap in place. **FIGURE 4**

FIGURE 4

BACKREST ONLY OR LOW SETTING

WIRING HARNESS INSTALLATION

1. Remove side scuff plate and kick panel of the vehicle.
2. Starting under the seat, route three wire extension harness **'C'** through carpet opening under the seat toward scuff plate, run the harness along the scuff plate toward the fuse panel. (If no carpet opening, create as required)
3. **FOR POWER**, cut the red wire on the extension harness **'C'** to desired length and solder **OR** use attached butt splice to fused harness **'D'**, also solder the other end of fused harness **'D'** to a positive Accessory fuse (fused 10Amp or greater) **OR** Insert the red wire with special terminal from fused harness **'D'** assembly to a positive Accessory fuse (fused 10 Amp or greater)
   FOR GROUND, cut the black wire on the extension harness **'C'** to desired length, install ring terminal supplied and attach to a suitable ground source.
   FOR IGNITION, cut the green wire of the extension harness **'C'** to desired length and solder to ignition power. **(Improper installation could drain your battery if you solder to a constant battery source.)**
4. Verify that all wires and connectors are secured to seat frame with cable ties.

INSTALLATION

FINAL ASSEMBLY

1. Connect the wires from the seat heating element (lower & back rest) to the controller harness **'B'** under the seat. Check that the element in the seat back is connected to the harness **'B'** lead that is labeled **BACK**.
2. Re-install seat back cover and cushion cover. Relocate seat into vehicle. (Do NOT install mounting bolts)
3. Connect the switch Assy **'E'** to the controller harness **'B'** under the seat.
4. Connect the extension harness **'C'** to the controller harness **'B'** under the seat.

NOTE: Verify that all connections are secured and the seat movement will not interfere with harness.

5. Install seat mounting bolts making certain to torque mounting bolts to manufacturers recommended specifications.
6. Re-connect the negative battery cable per owner's manual, and test the function of the seat heater.
7. Re-check all systems and Accessories where components were removed or relocated during the installation process.
8. Re-install scuff plate and kick panel.

OPERATION AND TROUBLESHOOTING

OPERATION PROCEDURES

The seat heater system provides lumbar heat alone or both lumbar and cushion heat in **Back and Both Mode**. It provides heat on both surfaces at two temperatures for the **High/Low** setting.

OPERATION: The switch is used to operate the system. It has a **BOTH/HI** setting and a **BACK/LOW** setting. If your seat heater system was installed correctly, it should perform as indicated below. To turn the heater system on, turn the vehicle ignition to 'on' position.

BACK/BOTH ACTIVATION: The external wire loop must be intact for this mode. Placing the switch in the '**LO**' position, LED turns **RED,** warms the backrest alone. Placing the switch in the '**HI**' position, LED turns **GREEN**, warms both the backrest and seat cushion. The controller module will regulate the seat temperatures until the switch setting is changed or until the vehicle ignition is turned off. Placing the switch in the center position turns the system off.

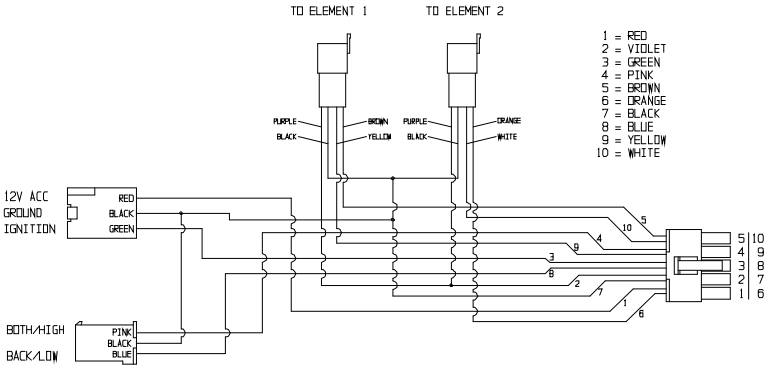
HI/LOW ACTIVATION: The external wire loop must be cut away for this mode. Placing the switch in the '**LO'** position will warm up both element surfaces. The controller module will regulate the temperature until the switch setting is changed or the vehicle ignition is turned off. Placing the switch in the '**HI'** position will warm up the element surfaces to a warmer temperature level. The controller module will regulate the temperature until the switch setting is changed or the vehicle ignition is turned off. Placing the switch in the mid-position turns the system off.

OPERATION AND TROUBLESHOOTING

TROUBLESHOOTING

! WARNING !

Using a Test Light may cause damage to the vehicle. It is recommended to use a Volt/Ohm meter for all electrical testing.



A: NO HEAT

	POSSIBLE CAUSES	**SOLUTION**
STEP 1	No ACC.	*__Check__ all connections, vehicle ACC fuse, in line 10 amp fuse, fix or replace if needed.
STEP 2	No IGN. power	*__Check__ all connections, vehicle ignition fuse, fix or replace as needed.
STEP 3	No Ground	***Check** ground connections for continuity.
STEP 4	Switch	*__Check__ connection, if okay disconnect switch from harness. Using an Ohm meter, measure the following functions for continuity:

	SWITCH OFF *(position O)*	**SWITCH BACK/LO** *(position I)*	**SWITCH BOTH/HI** *(position II)*
Black to Blue	open circuit	closed circuit	open circuit
Black to Pink	open circuit	open circuit	closed circuit

(If not okay, replace switch, if okay go to Step 5)

STEP 5	Element	***Check** all connections, if okay disconnect element from harness, using an ohm meter, measure the resistance across sensor, yellow wires (at Room Temp.) = 19 to 21k ohms, if not replace element, if okay check continuity across element, white wires = 5 ohms or less, if not okay, replace element, if okay go to Step 6.
STEP 6	Harness	***Disconnect** controller Harness **'B'** and check continuity per wiring diagram on top of this page. If not okay, replace Harness **'B'**. If okay, disconnect the extension harness **'C'** from main harness and check for continuity: **Ground** black wire, **Ignition** green wire, and **Accessory** red wire. If not okay, replace Harness **'C'**, if okay, replace controller module **'F'.**

B: LOW HEAT

The system is operational, the amount of heat felt by the occupant could vary if the plus pad on the seat cover is 1/4 in. or more in thickness.

WARNING: The information in this manual has been carefully compiled through actual vehicle testing and manufacturers service manual research and to the best of our ability is accurate . However, we do not warrant the accuracy of this information against changes in vehicle design, the use or misuse of this information or typographical errors. It is the responsibility of the installer to verify the proper wire attachments prior to and after the installation of the Seat Heater System to assure proper operation. We do not accept any responsibility for damage to the vehicle or injury to its occupants caused by the use of this information. Improper installation and/or connection to the incorrect wires could cause Seat Heater System or vehicle malfunction, component damage and/or personal injury for you and/or your passengers.

36 MONTH/36,000 MILE LIMITED WARRANTY

Rostra Precision Controls, Inc. (the Company) warrants to the original retail purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven to have defective material or workmanship within 36 months or 36,000 miles of the original purchase, such defect(s) will be repaired or replaced (at the Company's option) without charge for the parts. This warranty does not apply to batteries or normal wear and tear associated with the Product.

To obtain repair or replacement with the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to the installing dealer and/or retailer.

This Warranty does not cover costs incurred for the removal or reinstallation of the product, and/or related components, and/or damage to the vehicle's electrical system or components.

This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, misuse, neglect, accident, or customer abuse.

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 42 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY THE PURCHASER FOR THE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

ROSTRA PRECISION CONTROLS INC.
2519 Dana Drive * Laurinburg, NC 28352 * (910) 276-4853

OWNER'S WARRANTY RECORD

(To be completed by selling dealer and retained by customer)

Customer's Name _____

Address _____

Dealer Name _____

Dealer Address _____

City _____ State _____ Zip _____

Date Purchased _____ Date Installed _____ Make & Year of Car _____

Mileage at Installation _____